

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PALGE04253</b>	<b>FOR FURTHER ACTION</b>	
	see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/KR 2004/002223</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>22 September 2003 (22.09.2003)</b>	International filing date ( <i>day/month/year</i> ) <b>2 September 2004 (02.09.2004)</b>
Applicant <div style="text-align: center; font-weight: bold; margin-top: 10px;">LG ELECTRONICS INC.</div>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 4

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

**Continuation No. IV:****Text of the abstract****(Continuation of item 5 of the first sheet)**

A reciprocating compressor comprises a casing including a suction pipe (SP) through which a fluid is introduced from the outside and a discharge pipe (DP) through which the fluid is discharged outside and forming a predetermined internal space; a compressor main body (700) positioned in the casing (100), compressing the fluid introduced through the suction pipe (SP) with a linear reciprocating motion of a piston (420) and discharging the compressed fluid through the discharge pipe (DP); and a supporting unit (600) including a plurality of coil springs connecting the compressor main body (700) to the casing (100), wherein the plurality of coil springs (610,620) includes, respectively, end coils (590) tightly wound so as to be fixed to one surface of the compressor main body (700) and to one surface of the casing (100) and an inner coil (580) having at least one part which is tightly wound and positioned between the end coils (590), thereby minimizing the lateral vibration of the compressor, which is generated in a direction that a reciprocating motor is operated in operation of the reciprocating compressor.

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 2004/002223

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: F04B 39/00; F04B 39/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC<sup>7</sup>: F04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WPI, EPODOC, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2001/098658 A2 (EMPRESA ...) 27 December 2001 (27.12.2001) <i>abstract, figures 3-5, page 5 line 4 - line 32, page 5, line 19 - line 29.</i>	1
A	—	2-21
X	JP 06-033877 A (SON) 8 February 1994 (08.02.1994) <i>figures 1, 2, abstract.</i>	1
A	—	2-21

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
9 November 2004 (09.11.2004)

Date of mailing of the international search report  
24 November 2004 (24.11.2004)

Name and mailing address of the ISA/ AT  
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INTERNATIONAL SEARCH REPORT  
Information on patent family members

International application No.  
PCT/KR 2004/002223

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
JP	A	33877A2		none	